K-12
15

THE JOURNAL OF SCHOOL HEALTH

VOL. XVII No. 1

JANUARY
1947

Gertrude E. Cromwell,
Supervisor H. E. & School Nursing,
639 Third St.,
Des Moines, Iowa.

71

PUBLISHED BY
THE AMERICAN SCHOOL HEALTH ASSOCIATION

AMERICAN SCHOOL HEALTH ASSOCIATION

Organized 1927

Devoted to the interests and advancement of those engaged in school health activities and the service rendered by them

Officers of the American School Health Association

President:
Walter Wilkins, M.D., Jacksonville, Florida

President-Elect:
David Van der Slice, M.D., Flint, Michigan

Vice-Presidents:
V. K. Volk, M.D., Saginaw, Michigan
Chairman, Membership Committee

Cyrus H. Maxwell, M.D., Albany, N. Y.
Chairman, Program Committee

Executive Secretary and Treasurer:
A. O. DeWeese, M.D., Kent, Ohio

Editor:
Charles H. Keene, M.D., Buffalo, N. Y.

GOVERNING COUNCIL

Term Expires 1947

Kenneth Gibson, D.D.S.
Detroit, Mich.

H. F. Kilander,
New York, N. Y.

Paul Kinney, M.D.,
Altadena, Calif.

Howard Lundy, M.D.,
Seattle, Wash.

Guy N. Magness, M.D.,
University City, Mo.

Term Expires 1948

William A. Ayling, M.D.,
Syracuse, N. Y.

Sue Thompson Gould, M.D.,
Hudson, N. Y.

Lon W. Morrey, D.D.S.,
Chicago, Ill.

Anna Neukom, R.N.,
Binghamton, N. Y.

Arthur T. Turner, M.D.,
Chicago, Ill.

Term Expires 1949

Gertrude E. Cromwell, R.N.,
Des Moines, Iowa

Mildred Doster, M.D.,
Denver, Colo.

Paul Landis, M.D.,

L. A. Pequegnot, M.D.,
Toronto, Canada

L. M. Smith, M.D.,
Pittsburgh, Penn.

Past Presidents, Ex-Officio

C. Morley Sellery, M.D.,
Los Angeles, Calif.

S. B. McPheeters, M.D.,
Goldsboro, N. C.

Helen Ahrens Cary, M.D.,
Portland, Ore.

All other living Past Presidents

Affiliated Associations

Am. Ass'n Health, Physical Education, and Recreation.
Ben Miller, Washington, D. C.

Michigan Ass'n.
Bernard W. Carey, M.D.,
Director, Children's Fund of Michigan, Detroit, Mich.

California Branch A.S.H.A.
L. Velma Seanor

THE JOURNAL OF SCHOOL HEALTH

Vol. XVII JANUARY, 1947 No. 1

CONTENTS

The Denver Area Rheumatic Fever Diagnostic Service 1
Bernice G. Wedum, M.D.

The Resonsibility of the Medical Profession for Child Development 6
Charles H. Keene, M.D.

Twelve Years of Tuberculosis Case Finding Among High School Students 14
William E. Ayling, M.D.

"Integration of Community Health Education and School Health Educacation"—A Committee Report 20
Florence Benell, Chairman

Treatment of Pediculus Capitis in School Children with DDT Powder 24
Albert D. Kaiser, M.D.

Editorial 26

Abstracts 13, 27, 30

Reviews 29

Meetings 29

THE JOURNAL OF SCHOOL HEALTH

Published monthly, except July and August, at Buffalo, N. Y.

THE AMERICAN SCHOOL HEALTH ASSOCIATION

3335 Main Street, Buffalo 14, New York

Editor
CHARLES H. KEENE, M.D.
University of Buffalo, Buffalo, N. Y.

Assistant Editor
GERTRUDE E. CROMWELL, R.N.
Des Moines, Iowa

SUBSCRIPTION RATES TO THE JOURNAL

Membership dues, $2.00, including $1.75 subscription. Subscription $1.75
Single copies 25c, send payment with order

Address all communications to
THE EDITOR, The Journal of School Health
3335 Main St., Buffalo 14, New York

Copyright, January, 1947, by
The American School Health Association

Entered as second-class matter at the Post-Office at Buffalo, N. Y.
October 5, 1937

COPYRIGHT, 1943
MEAD JOHNSON & CO.
EVANSVILLE, IND., U.S.A.
PABLUM
PABENA

THE JOURNAL OF SCHOOL HEALTH

Devoted to the interests and advancement of school health service and instruction. Your participation by membership is solicited.

Vol. XVII JANUARY, 1947 No. 1

THE DENVER AREA RHEUMATIC FEVER DIAGNOSTIC SERVICE: OBSERVATIONS ON 2,000 CASES SEEN DURING THE FIRST TWO YEARS — PRELIMINARY REPORT*

BERNICE G. WEDUM, M.D.

Assistant Director Denver Area Rheumatic Fever Diagnostic Service and Department of Medicine, University of Colorado School of Medicine, Denver, Colorado.

Rheumatic heart disease is the first cause of death among school children in many areas. Colorado leads all other states in deaths from rheumatic heart disease among children during the years 1939 to 1942 and it has been among the first five states for the last twenty years.

In 1944 the Denver Area Rheumatic Fever Diagnostic Service was set up as a first step in the organization of a complete rheumatic fever program for the state of Colorado.

The Denver Public Health Council, which is the Health division of the Denver Council of Social Agencies, requested and received from the Junior Community Chest, a grant of $12,000 to inaugurate the Diagnostic Service. Following approval by the regents of the University of Colorado, the clinic was located at the University of Colorado School of Medicine and Hospitals.

The primary purpose of this service was to find cases of rheumatic fever and heart disease among school children, and to see that they came under proper medical supervision.

The personnel of the clinic is as follows:

Director (and Dean of the Medical School) : Ward Darley, M.D.
Assistant Director (half-time) : Bernice G. Wedum, M.D.
Clinician (2 afternooons a week) : Paul Rhodes, M.D.
Clinician (Monday afternoon)—Private practitioners who
Clinician (Friday afternoon) usually serve for 3 months and are paid $15.00 per afternoon.
Secretary—full time.
Secretary—half time.
Medical social worker—half time.

*Read at Annual Meeting American School Health Association, Cleveland, Ohio, November 11, 1946.

Technician—half time.
Nurse—2 afternoons a week.
Dietitian—2 afternoons a week.
4 Red Cross Nurses' Aids—2 afternoons a week.
9 Medical Students—2 afternoons a week.

The rules of operation of the clinic follow those recommended by a special committee formed by the Medical Society of the City and County of Denver are as follows:

1. Any school child examined by a school physician may be referred to the clinic with the written approval of the private physician.

2. If the child is already known to be attended by a private physician, a record of the findings shall be sent to that physician. If the difficulty in diagnosis indicates a need for subsequent visits, this may be granted if the private physician agrees.

3. If the child meets the requirements for indigent care, he may return to the clinic for as many visits as seem necessary for diagnosis.

4. If the child is not an indigent, and has no private physician, his parents shall be notified that the child should be under the care of a physician. The parents will be requested to notify the clinic of their choice so that the clinic can send its medical report to the physician selected by the parents.

5. The clinic will not refer patients to any physician.

6. Any social service agency can send children of indigent parents to the clinic.

7. Any physician may refer a medically indigent child to the clinic.

8. Any physician can send a private patient to the clinic for the one or more visits necessary for a diagnosis.

9. Records shall be kept of all patients. The list of such patients shall be reviewed as necessary by the Director of the Clinic and the Budget and Auditing Committee of the Denver Public Health Council and suitable action taken as abuses arise.

10. No fees shall be charged patients or physicians for the services of the clinic.

When the school physician finds a child in whom he suspects heart disease or rheumatic fever, a card is sent home requesting the name of the family physician. If the child has a family physician, a letter is written by the Director of the School Health Service to the physician, explaining the purpose of the Rheumatic Fever Diagnostic Service and asking permission for the child to be referred. The permission slip is enclosed in this letter. There

were 369 physicians contacted the first year and 134 the second year. Each year 90 per cent indicated that they wished the child referred to the Rheumatic Fever Diagnostic Service. If permission is given, appointment is made for the child. If the child has no private physician, then he is referred directly by the school nurse. Children are seen only by appointment.

Clinics are held weekly on Monday and Friday afternoons. Upon arriving at the clinic, the patient is registered, weighed, and measured. The urine is collected and blood obtained for a Wassermann and Eagle flocculation tests; sedimentation rate and blood count. The parents are interviewed by the Dietitian and Social Worker. A careful history is taken and physical examination performed. An electrocardiogram is taken and a fluoroscopic examination is done with barium in the esophagus. All children receive all parts of this examination regardless of what they show clinically.

While the primary purpose of these studies is to rule in or rule out rheumatic fever and rheumatic heart disease, congenital disease and many conditions which may be confused with rheumatic fever are found.

When all the findings have been evaluated a report is sent to the private physician and two copies are sent to the School Health Department. If a patient is not under medical supervision, the social worker determines whether or not the patient is eligible for treatment or follow-up in a charity clinic or whether he should be cared for by a private physician. In the latter case the parents are advised to seek further medical advice.

The Rheumatic Fever Diagnostic Service provides no treatment, which is considered a function of the private physician or the clinic to which the case is referred.

During the first two years of operation, 2,014 children were seen. The results are shown in Table I.

Forty-eight per cent of the children were referred from their own physicians, twenty-two per cent were referred from the School Health Service with the permission of the private physician and twenty-three per cent were referred directly from the schools with no private physician. The rest were referred from other sources. Seventy-one per cent of all children referred had private physicians.

Sixty-two per cent of all children referred had no heart disease; 979 of this group of 1,236 had physiologic or functional murmurs. Thirty-six per cent of the children or 731 were considered in the need of further supervision, because of rheumatic fever or heart disease. The diagnoses are shown in the table.

Of a total of 154 children who came to the clinic with active rheumatic fever or heart disease during the first year, 66 were entirely new cases, previously undiagnosed; 27 children had been previously diagnosed, but were not under adequate medical supervision, making a total of 93 new or unsupervised cases of rheumatic fever or rheumatic heart disease found. When this figure is divided by $12,000, the cost of running the clinic for the first year, it is found that the cost of discovering a case of rheumatic fever or heart disease in need of care is $129.00. This compares favorably with tuberculosis case finding programs.

Rheumatic fever is often stated to be a disease of poverty. An analysis was done on the incomes of the patients seen during the second year. The mean income range for the entire clinic group was between $2,000 and $2,500. The mean income for families of two or more persons in the United States is $2,069. The mean income of the rheumatic group also was between $2,000 and $2,500. We believe that these children represent an accurate cross section of the school population of an average American community such as Denver. When such a group of children is taken, representing all income levels, rheumatic fever is found to be evenly distributed among all school children and not merely a disease of persons in lower income brackets.

Extensive studies of this representative group of children are now in progress, including the character of the onset of rheumatic fever; age at the time of first attack; history of scarlet fever; effect of tonsillectomy; streptococcal infections; family history of rheumatic fever; electrocardiographic and fluoroscopic findings; dietary intake and a number of economic factors. The large number of patients with no heart disease, in whom these factors were also carefully assessed will provide an adequate control group for these studies on rheumatic children. It is hoped that these findings will aid in the formulation of rheumatic fever programs and research not only in Colorado but throughout the country.

We believe that such a diagnostic service, used extensively by private physicians, should form a part of any rheumatic fever program for the following two reasons: First, it is an accurate and economical method of case finding; second, with increasing publicity concerning rheumatic fever, thousands of children with loud functional murmurs are going to be told that they have rheumatic heart disease. The writer believes that a wide-spread program of lay publicity concerning rheumatic fever is not justified in any community unless some service of this nature is available, otherwise in our efforts to care for the children who are rheumatic, we

are going to make invalids out of a large number who are not, and end up by doing more harm than good.

TABLE I

RHEUMATIC FEVER DIAGNOSTIC SERVICE
DENVER, COLORADO

Results of First Two Years Operation

Total Clinic Visits	2,875	
Total New Patients Seen Sept. 15, 1944 - Sept. 15, 1946	2,014	
Discarded Because Partly Incomplete	50	
Total Cases Analyzed	1,964	
Source of Cases		**Percentage**
Referred Directly from Private Physicians	923	48
Referred from Schools with Physician's Permission	441	22
Referred from Schools—No Private Physician	463	23
Other Sources	137	7
Total Cases with Private Physician	1,399	71
Diagnoses		
No Heart Disease	1,236	62
Rheumatic Fever and Heart Disease (All Classes)	731	37
Rheumatic Fever, Rheumatic Heart Disease	280 - 14%	
Potential Rheumatic Heart Disease (History of RF)	157 - 8%	
Possible RF and RHD	171 - 9%	
Congenital Heart Disease	79 - 4%	
Possible Congenital Heart Disease	34 - 2%	
Other Organic Heart Disease	10	
Miscellaneous Other Conditions	406	
New Cases (First Year Only)		
Total New Cases	66	
Total New and Unsupervised Cases RF & RHD	93 (of total 154)	
Cost of Discovery per Case	$129.00	
Cost of Discovery Tuberculosis in Denver	$167.00 - $250.00	

* * * * *

THE RESPONSIBILITY OF THE MEDICAL PROFESSION FOR CHILD DEVELOPMENT*

CHARLES H. KEENE, M.D.
Professor of Hygiene, University of Buffalo

I am not sure whether this is a pronouncement, a history, a reminiscence, or a valedictory.

The responsibility of the medical profession for child development is only partial.

The medical profession can, through research, study, and experience, point the way to better health; it can, through the skill of its practitioners, make the errors of others have less serious results; it can advise and instruct how disease and other interferences with proper health and development may be avoided; it can set up programs, in schools, homes, and communities, for better growth; but the real responsibility rests squarely in the hands, abilities, and consciences of those with whom and under whose control the child spends his time and carries on his activities. The true responsibility, then, is that of parents, teachers, health officials, law makers, law enforcement officers, including judges, and of those who control private and public funds.

Having set up an alibi for the medical profession, I will now try to show what the responsibilities are, with what success they have been met, and give some of the reasons for our seeming failure.

Any adequate study of growth and development of the child must go far beyond the present infant and child: it should take us into the fields of anthropology, of heredity, and of embryology, as well as into those of pediatrics and education.

However, confining ourselves to the present individuals, what are the factors that most specifically relate to the growth and development of the child; what are the responsibilities?

These may be placed in one or more of several categories: *First:* Control of communicable diseases, since these menace not only health, growth and development, but life itself. These diseases seriously interfere with development, flatten the weight graph even causing loss of weight, and often leave after-effects that are serious drains on health, physical growth, and mental development, and interfere with the educative processes.

In this category there has been a phenomenal improvement. While the general death rate has dropped from 18.0 ± per 1,000

*Read at the Annual Dinner Meeting of the American School Health Association, Cleveland, Ohio, November 11, 1946.

population in 1900, to approximately 11.5 in 1945, the median age at death has risen from 46 years in 1900, to 64 years in 1945. The improvement in the rate has been due largely to control of communicable diseases and a saving of young lives. Hence, the remarkable rise in age at death. Improvement in death rates of certain diseases is astounding; such as—

SMALLPOX:

At last, as regards this disease, our country seems to have shed its swaddling clothes of *dolce far niente* and of superstition. There were only 384 cases of this loathsome and unnecessary disease in the whole United States in 1944. Twenty-five years ago, in 1921, there were 109,000 cases of the disease in the United States. In 1872, the death rate from it ranged from 113 per 100,000 population in New York City, to 504 per 100,000 in Baltimore, and 565 per 100,000 in New Orleans. Vaccination against this disease was well known before that year. In Providence, R. I., where vaccination had been a requirement for school attendance since 1856, the rate in 1872 was only 17 per 100,000.

Results in this control, as well as in most matters of health and development are more than a responsibility of the medical profession: they are a responsibility and duty of parents, teachers, clergymen, law makers, and public press.

DIPHTHERIA:

This disease, the great epidemic of childhood, known to our colonial ancestors as the "throat sickness" was the scourge of childhood and the terror of parents. One-third of all who had the disease died of it.

Today, toxin-anti-toxin and toxoid have removed this horror from the hearts of parents. Moreover, if an adequate per cent of children of school age are immunized (35% has been the minimum standard set by our State of New York Health Department) we were told there will be no epidemic. There is considerable evidence, however, that for adequate protection this percentage should be at least doubled and each case followed by booster doses. A fire cannot rage without fuel. One city in New England reports 94.5% of its kindergarten and first grade children immunized.

TUBERCULOSIS:

The perennial plague is disappearing. Showing a death rate in 1860 of 400 per 100,000, reduced to 200 per 100,000 in 1900, it now causes only 45 deaths per 100,000 per year. Health education based on medical science resulting in early diagnosis and treatment is wiping out this disease.

NOSE, THROAT AND MOUTH INFECTIONS:

These are still rampant in spite of our efforts to prevent and cure them. The responsibility for controlling these menaces to health and development is, to be sure, a part of the burden of the medical profession. But what of the parent that neglects or refuses to get proper dental or other care, often offering the defense of lack of funds. Lack of funds does not seem to interfere with these parents attending motion picture shows several times per week, nor with running the family automobile, and, in many cases, it does not keep them from attending night clubs and other types of bar rooms, while the teeth, and therefore the health, nutrition and development of their children steadily trend down hill.

Then there are the DIARRHEAS of early childhood:

These, plus the other menaces now so largely under control, caused at the beginning of this century an annual infant death rate of over 200 per 1,000. Being a baby under one year of age was the most dangerous occupation in the world. This infant death rate is now in the lower forties.

How has the medical profession accepted and met its responsibility in this phase of child development? The list of health betterments, all based on medical science, is not long:

1. The care of milk, including the environment of its production, the elimination of tuberculous cows, Pasteurization, and refrigeration.
2. Refrigeration of milk, meats, salads, cream pie fillings, etc.
3. The efforts to persuade mothers of young infants to feed them in the natural way, rather than from a bottle.
4. Artificial immunization.
5. Purification of water supplies.
6. Safe disposal of sewage and other refuse.

These diseases—infections—were serious obstacles to development, resulting in serious loss of school time, in restricted education, in mental and physical retardation. Studies of growth charts show clearly that infections result in cessation of gain, and often in loss of weight. Their control is a responsibility of the medical profession, but physicians alone are helpless to a great extent without the cooperation of home, school, and community.

The *second* category we will call Physical Education:

Any efforts toward child development through physical activities, whether play, dancing, athletics, or more formalized efforts, should be founded on intimate knowledge of anatomy, physiology, psychology, and of the laws of growth.

The early great leaders of Physical Education in the United

States were physicians: Hitchcock, Sargent, Arnold, Nissen, Gulick, Wood, Leonard, McCurdy, all were Doctors of Medicine.

These men put an empirical physical education on a scientific basis, and gave it standing and prestige, and made it a part of the education of our youth.

Only if such guidance and supervision is maintained will the true health and development goals we desire be reached.

Medical guidance and supervision is particularly and peculiarly needed in the field of competitive athletics, whether intramural, interscholastic, or intercollegiate. Decisions as to physical fitness to compete should rest in the knowledge and experiences of physicians, not in the hands of any person, not so equipped, who often is more intensely interested in the sport and its winning than in the adolesecnt competitor, or in such competitor's true health and safe development.

The *third* important category is Nutrition:

Nutrition, too, is basically a responsibility of the Medical profession. Physicians acknowledge our huge debt to the specialists in dietetics, but, if good results are to be obtained, this field must be supported by sanitation, control of communicable diseases, inoculations, good housing, physical activities with other forms of recreation, adequate sleep and rest, good mental and physical hygiene, and a protective and healthful school program. All these properly grouped constitute nutrition.

As greater burdens relating to the health program are thrown on the public school, certain factors threaten that program. Among these are:

Inertia
Lack of a definite program
Lack of time allotment
Lack of funds
and

The obsession of many school officials that, while "health" is a pretty thing to list as a fundamental of education, it must not take time from the study of language, mathematics, history—and goodness knows intensive study of the history of our country is needed—and of how this country was earned and has been maintained by "sweat and blood"—and needed, too, is study of its social concepts. Nor will these educators let this health program interfere with the educators' concept of "integration," which in many schools gave the final and lethal blow to any health instruction program.

Results—long range evidences of success are apparent.

What have been the improvements in health, growth, and life, resulting from improved living, housing, control of communicable diseases, good nutrition, and a program for better health of children, based on school activities?

So far as the schools are concerned, this program for better health of children under a more healthful environment is a growth of fifty years. The first public school nurses in this country were employed a few years later.

How bad is our present situation? Draft board figures, plus later rejections by doctors in the armed services show an extremely depressing situation, if we look at the figures alone. There seems to have been an increase of bad physical conditions each time a war is thrust upon us. This is more seeming than real. The statistics are right, but the conclusion that we are a physically deteriorating people is false. With each war the physical and mental standards for admission to the armed forces have been raised. In the Revolutionary War, all that was needed for admission to these forces was a willingness to serve, the possession of a musket, and legs enough to get their owner to Concord or to Bunker Hill. In World War I, few were eliminated because of mental conditions. No intensive examination for these conditions was given. In World War II, illiteracy, feeble mindedness and psychoses make up the major portion of the rejections.

A huge proportion of rejections are due to the fact that men neglect their physical condition after leaving school. Studies on the boys just out of high schools show a low rejection rate—9%. The rate goes up steadily and at an increasing pace as the time span from high school increases, until the rate was so high at ages forty and over that it was felt a waste of time to examine these older men, and the compulsory induction age limit was reduced to thirty-eight years.

Fortunately, for the record, some of our older colleges have been making careful physical examinations of their students since 1880. In the half century following that time, the records on father, son, and grandson, and on mother, daughter, and granddaughter, direct descendants mind you, show an increase in height and weight each generation.

At Harvard, the recent sons were 8.15 pounds heavier than their fathers and 1.4″ taller. These sons showed an average height of 5′ 10″—one of the tallest groups in the world.

At Wellesley, the women were 7.25 pounds heavier and 1.1″ taller than their mothers. Other studies on young women show

definitely a body form indicating greater vigor, power and potentialities for health than did similar studies of fifty years ago.

At Yale the number of six-footers has increased from 4.3% in 1883, to 22.6% in 1943.

The average soldier in 1943 was 0.7 inches taller and 9.1 pounds heavier than in 1917.

These figures do not indicate a physically decadent generation.

These improvements were not brought about by wishful thinking. They are the results of scientific studies in the fields of biology, chemistry including dietetics, the sanitary sciences especially as related to better municipal, state and national environments of pure food, pure water supplies, safe adequate sewage disposal, and other controls of factors relating to communicable disease; and to advances in medical sciences.

The responsibility of the physician, then, for the proper and adequate development of the child is enormous, but not total. The sciences and ideals of medicine must be supported by the family, the community, and the state, all keeping in mind the truism that physical fitness must be *achieved*, and it can be achieved only by the individual effort of all concerned, particularly by the child himself.

In conclusion, if this be a valedictory, I quote John McCrae: "To you, from failing hands, we throw the torch; be yours to hold it high," and so, fellow workers, the flaming torch of Progress passes on to youth.

CHARLES HERBERT KEENE

Charles Herbert Keene, born February 8, 1875, at Palmyra, Maine, son of Herbert H. and Mary Florence (Pratt) Keene. A.B. Degree from Harvard University in 1898 and M.D. Degree from the Harvard Medical School in 1902. Practiced medicine in Boston and Lowell, Massachusetts, 1903-1909; graduate study at Harvard in the summers of 1908 and 1909. November 30, 1904, he married Louise Josephine McLoughlin. Widely experienced in education and in health and physical education. Among his many positions are: Director of Hygiene and Physical Education in the Public Schools of Minneapolis, Minnesota, 1909-1919; Executive Secretary of the Delaware State Tuberculosis Commission, 1919; Director of Health Service in New England Division of the American Red Cross, 1920; Director of the Bureau of Health Education, Department of Public Instruction of Pennsylvania, 1921-1925; Professor of Hygiene and Director of Health and Physical Education, University of Buffalo since 1925; Instructor in Summer Schools in various Universities from 1916 to 1941; Director of Physical Education courses at Harvard, summers 1925-1932; Lecturer on Physical Education, Graduate School of Education, 1926-1927.

Member and office-holder in a number of organizations: a Fellow of the American Public Health Association and was the Chairman of the Child Hygiene Section in 1925-1926; member of the American Medical Association; of the American Physical Education Association, of which he was President of the Eastern Section from 1925-1929 and was elected an Honorary Fellow in 1932; of the National College Directors of Physical Education; of the Minnesota Physical Education Society, President thereof 1913-1914; of the Pennsylvania Physical Education Society of which he was the President from 1922-1924; Fellow of the American School Health Association and President thereof in 1935; member Phi Delta Kappa; listed in "Who's Who in America."

During World War I, he served as a Captain and later Major, Medical Corps, United States Army.

Author of many articles and several textbooks in the field of school health and physical education. Among his books are: "Manual of Physical Training, Games and Mass Competitions," 1914; "The Physical Welfare of the School Child," 1929; "Foundations of Health," 1932 (With Francis L. Bacon and Josephine Rathbone). Editor of "Alex and His Friends," 1932, and since 1936, "The Journal of School Health."

As a personal note: To those of us in New York State who have learned to lean so heavily upon Dr. Keene for advice and guidance, the name "Keene" seems particularly appropriate. He has a keen mind, keen sense of humor and keen tongue. He is a keenly critical and steadfast friend. We have one serious misgiving about Dr. Keene—we feel that in the all-to-near future and any time in the future is too near, Dr. Keene may consider retiring. If he does, we do not at present see anyone who can quite take his place. It is a singular privilege to present for the WILLIAM A. HOWE award — DR. CHARLES HERBERT KEENE.

* * * * *

Tuberculosis Among College Students.—The campaign against tuberculosis, conducted for so many years with fruitful results, is assisted effectively by the American Student Health Association through its Committee on Tuberculosis under the chairmanship of Dr. Max L. Durfee.[1] Its fifteenth annual report for the academic year, 1944-1945, shows that 312 colleges and universities in 43 states have some type of tuberculosis program. The chief activity of the Committee on Tuberculosis is the encouragement of screening tests to discover unsuspected cases. The members of the Committee are emphatic in recommending the use of tuberculin (purified protein derivative, PPD) given in two doses by the Mantoux method, as the most useful means of case-finding. It "is the easiest and most certain method of demonstrating the presence of living tubercle bacilli in the body of an infected person." They reject the Vollmer Patch Test as inefficient.

The authors believe that the X-ray alone is not adequate to "tell us who has and who has not been infected with the germ of tuberculosis." "Healed" and "calcified" lesions have been shown to be due to ascaris, coccidioidomycosis, and histo-plasma capsulatum.

In those types of calcified lesion, the tuberculin test will show the person to be a nonreactor. If tuberculin is used as the first screening test, it aids the physician by sounding a warning to him to look carefully at repeated X-ray films of reactors. Early tuberculosis is found only when and where looked for.

It is seen that in colleges with a tuberculosis program in effect, the discovery of new cases was twelve times more efficient. From Editorial, *New York State Journal of Medicine*, November 1, 1946.

[1]Durfee, Max. L.: Journal Lancet 66: 171 (May) 1946.

TWELVE YEARS OF TUBERCULOSIS CASE FINDING AMONG HIGH SCHOOL PUPILS*

WILLIAM E. AYLING, M.D.
Health Director, Syracuse Schools; Assistant Professor of Public Health, Syracuse Medical College

Twelve years of tuberculosis case finding among public and parochial high school pupils of Syracuse has demonstrated the value of this procedure.

Our surveys were started in 1934 and have been carried on annually since then, using the tuberculin test as a screening method, and then X-raying those found to be positive reactors. Searching for tuberculosis among apparently healthy children, such as are in daily attendance at school, has been found valuable from at least four standpoints:

1. The *education* of pupils and parents as to the importance of this disease and the methods of its prevention, detection and cure.
2. The *individual welfare of the child;* active disease found early is quickly cured.
3. The *protection of public health* by excluding from school the active cases found, and placing them under proper supervision so that the disease will not be spread by them.
4. It sometimes leads to unknown cases of active tuberculosis that were the *source of infection.*

Our procedure has been, first, to use all available means, such as the radio, the press, movies, lectures to parent-teacher groups and other organization, together with the distribution of form letters and pamphlets, to acquaint pupils and parents with the importance of tuberculosis, its early discovery, and its control and cure. Our efforts have been most successful where full cooperation of the school principal and his teaching staff was obtained. The local County Health Association has assisted greatly by showing movies on tuberculosis in the schools and furnishing speakers for assemblies.

During the first four years, 1934 to 1938, we varied the grades to be tested, starting with the 11th and 12th and going down as far as the 8th. However, from our results we decided that the 11th and 12th, i.e., senior high pupils, furnished the most fertile field for our endeavors. We confined our work to these grades for the next five years, 1938-43, but in the fall of 1943 decided to include

* Presented Monday, November 11, 1946, before the American School Health Association, Cleveland, Ohio.

the 10th grade also. This was done for two reasons; many pupils were taking jobs working after school in war industries and it was thought that the added strain might lead to more tuberculosis, and it was pointed out that many pupils left school at the end of the 10th year, the drop in registration amounting to over 25%.

Signed requests are required from all parents whose children are to be tested. We have uniformly used the Mantoux method of giving the tuberculin test, using a 1/1000 solution of Old Tuberculin obtained through the local branch of the State Laboratory. The one test procedure has been followed, reading the results on the second day. The tuberculin tests have been given by the same physicians for a number of years, the same solution used and the readings made by the same doctor.

During the first three years of our survey we found an average of 35% of those tested to be positive reactors. The next year, 1937-8, this percentage dropped to 30 and the following year to 14.5. Since then it has gradually fallen to the present low level of 6.2%. Apparently there has been a marked decrease in the incidence of tuberculous infection in this age group (15 to 19 years).

I believe that the rapid drop in the percentage of positive reactors in the year 1938-39 was partly due to the fact that for the first time we were repeating tests in grades (11 and 12) on pupils who had had the opportunity of taking the test while in the lower grades. Our policy has been to retest those who have been previously negative but not to retest positive reactors. Therefore, we had already screened out some positive reactors who were not retested.

Since 1943, for the past three years, we have continued to follow this policy, giving the test to all in the 10th grades who would take it and retesting those in the 11th and 12th who were negative reactors the year before or had never been tested. Those who were found to be positive reactors, were urged to have yearly X-rays without further tuberculin tests.

The response to the offer of the tuberculin test has averaged over 55% of the registration of these 10th, 11th and 12th grades. Recently it has been better, 73% average for the past three years and as high as 90% in some schools. During the twelve years we have given nearly 35,000 tuberculin tests and found 5,586 to be positive reactors.

For a number of years we recorded the degree of reaction to the tuberculin test for each pupil, but found that it was in no way indicative of the amount of disease one would find on further study.

During the first two years 2 of the active cases had only 1+ reactions, whereas 21 who were negative on further study and 35 who had apparently healed lesions were 4+ reactors. Pupils became greatly alarmed when they heard the reading by the doctor as 3 or 4+; so we discontinued this method of reading and now simply mark them positive or negative.

The next step in our procedure is to X-ray, at school, the positive reactors. For this purpose a 30 milliampere mobile X-ray machine, loaned to us from the City Hospital by the Health Department, is used. Full size 14 x 17 films are used, the pictures being taken at four feet with a quarter of a second exposure in most cases. A few pupils, less than 10%, have gone to their own doctors, or elsewhere, for this service.

For every pupil X-rayed, a history sheet is made out, on which is recorded the family history, past and present symptoms, if any, and any history of possible contact. The height and weight and so called "standard weight" are also recorded.

After developing, the X-rays are sorted and the proper history sheet placed with each one. All data are reviewed when the film is interpreted by the Director of the local Bureau of Tuberculosis and the Health Director. A summary of the history, the reading, diagnosis and recommendation are taking in shorthand and later typed for our files. A copy of this record goes to the family physician in each case where a physician is named on the history sheet and the Chest Clinic also receives a copy. All films are filed at the School Health office and are available to the family physician or clinic.

For simplicity the cases are classified as to activity:

Class A — Essentially negative—no evidence of active pulmonary tuberculosis.
Class B — Apparently healed childhood type.
Class B-2 — Suspicious of activity.
Class C — Probably active.

During the twelve years we have X-rayed in school approximately 5,000 positive reactors and of these 37, or 0.7%, were found to have active trouble and 329, or 6.5%, were classified as "suspicious." About an equal number, 45% and 47%, made up the larger groups of those "essentially negative" and those classified as "apparently healed."

The first year of our survey (1934-35) we found 11 active cases, most of whom had moderately advanced pulmonary tuberculosis and some of whom in spite of sanatorium care succumbed to the disease. The second year we found 8 cases and the third,

7 cases. Since then each year we have found only 2, 1 or no cases and usually these are minimal.

Of the 37 "C" cases, 20 entered sanatoria, where 5 have died and 4 are now under treatment. Twelve (12) have become arrested and 13 are continuing under observation. The original diagnosis was not confirmed in 5 cases after further study, and the present condition of 2 is unknown.

We have knowledge of at least two "B-2" (suspicious) cases becoming active and 4 of the pupils originally classified as "A" (essentially negative) also became active. This shows the importance of close follow-up of all positive reactors by repeated X-rays.

It has been our policy for all twelve years not to re-X-ray positive reactors in school. These children need careful health supervision so are referred back to their private physicians or to the Chest Clinic if they have no physician. Our program is mainly case finding with close follow-up, and we would be severely criticized if we were to take more than the first X-ray on these cases.

Each year we have kept a record of those re-tested who had had previous negative tests and we find that 2.6% became positive reactors. Of these, 2% show active trouble and 10% are classified as suspicious. We have definite knowledge of at least one of these cases leading to the discovery of an active case in a home, the father, who was found to have advanced pulmonary tuberculosis. We always recommend on our notices to physicians and parents that other members of the household be X-rayed. We have no way of knowing how many sources of infection are found as a result of this recommendation. The local County Sanatorium has a rule that a patient is not to be admitted to the sanatorium unless it is agreed that all contacts have X-ray examinations.

Parents of all pupils X-rayed receive an appropriate letter, directing them to take the child to his doctor or to the Chest Clinic for advice and treatment. The school nurse delivers the notification letter to the home in all "C" (aparently active) and "B-2" (suspicious) cases. She discusses the pupil's condition with the parents, stressing the necessity for immediate medical attention. All pupils showing parenchymal involvement are excluded from school.

All positive reactors are followed up by nurses for at least two years. When pupils leave school (graduate or discontinue) the home supervision record are transferred to the generalized nursing bureau. Pupils moving out of the city to the country are referred to the out-patient department of the Onondaga Sanatorium.

As a rule we have had good cooperation from the local physicians. In a few cases, unfortunately, our recommendations were disregarded. In one instance the admission to the sanatorium of a girl found by us to have active trouble was delayed over a year by the private physician who took no interest in the case. This girl died soon after entering the sanatorium.

A few words should be said regarding the cost of this program. We have always used regular employees of our department and the city to do the work. Without including salaries, the cost for materials, such as films, stationery, printing, supplies and transportation of the X-ray machine for one typical year was $336.95. This represents a cost of 15 cents per pupil given the tuberculin test, $1.41 for each one X-rayed, or $18.72 for each suspicious and active case found. Of the 239 X-rayed, 100 each paid $1.00 toward the cost, so this reduced the cost to the city about one-third.

The amount of approximately $13.00 expended ($18.72 less one-third) for each suspicious and active case found would seem to be very small for finding such cases.

If estimated salaries are included, the cost, of course, is considerably more, being 78 cents per pupil tested, $7.34 per X-ray and $97.51 for each suspicious and active case found. Inasmuch as this personnel spent this time as part of their regular work I do not think their salaries should be included. They would receive the money anyway.

No tuberculosis case finding program in the schools would be complete without including school personnel. In Syracuse we have for a number of years required a health certificate including a report on X-ray of the chest from each new appointee.

The City Normal School was included in our surveys and one of our active cases was found there.

We had X-rayed 455 school personnel in school up to this spring. Of these, 9 were classified as observation cases and referred to their doctors for follow-up and care.

This year in May, the local Health Department X-rayed 1,227 of our employees, 789 of whom were teachers. The city-owned 35 mm. machine was used and the staff from that department took and developed the films. Because of State regulations we could not make it a compulsory requirement to be X-rayed, but offered it on a voluntary basis. Five schools responded 100% and the average response for the whole city public school system was 72.5%. We hope that all employees who were not X-rayed last spring will have it done soon, perhaps at the time the parochial school employees are X-rayed.

Dr. Leon Chadwick, who supervised this work, reports that of the 1,227 X-rayed, 39 required further study by using the full size 14 x 17 film. Thirty-seven (37) of these have had this follow-up study and two were found to need further observation. Apparently our school employees are unusually free from tuberculous infection.

A number of conditions other than tuberculosis were found by chest X-rays. Of 1,676 pupils X-rayed over a five-year period, 28 had heart abnormalities, 19 had deformities of the ribs, 23 spinal curvatures and 4 bronchiectasis. Of 161 adults, 19 had heart conditions, 3 spinal curvatures, 1 deformed ribs and 1 a lung tumor.

CONCLUSIONS:

Twelve years of tuberculosis case finding in Syracuse show that this procedure is valuable because it spreads the knowledge of the control of tuberculosis (it is a form of health education). It finds cases early that probably would not be found otherwise, and thereby prevents disability and the expense of long treatment. It serves to protect public health by preventing the spread of infection and it leads to the discovery of other unknown cases.

There has been a marked decrease in the incidence of tuberculous infection during these twelve years in our high schools and the cost of the procedure is money well spent for the results obtained. By using the tuberculin test as a screening method, now only 6.2% of those tested need to be X-rayed.

* * * * *

A COMMITTEE REPORT OF THE AMERICAN SCHOOL HEALTH ASSOCIATION ON "INTEGRATION OF COMMUNITY HEALTH EDUCATION AND SCHOOL HEALTH EDUCATION"*

One day about fifty years ago a young boy went to a well in the center of his town and drank from the common drinking cup which was provided there. Several weeks later he and several other of his classmates came down with typhoid fever. This was a community problem, a typhoid fever epidemic. At that time, neither the school nor the community knew much or did much about health education. Today, fortunately, great advances have been made in both phases; we are doing a much better job and we are having very few typhoid epidemics.

A sampling has been made of schools and community agencies throughout the country to discover what sort of integration is going on today between community health agencies and the school health program. About 50 schools responded to the survey, and 29 community health agencies.

The four procedures recommended by the Committee on Integration of Community Health Education and School Health Education accompanied the inquiry forms which were sent to the other committee members for distribution in their areas. Also, some of the members of the Governing Council assisted in this distribution.

The philosophy of school health education today stresses dealing with the problem of health from the approach of the whole child. The factors which are important in carrying forth a meaningful school health education program are that all the people dealing with the child recognize the same objective in a health program. It is also essential that there be integration not only between the various departments in the school, but also between the school and the home, and the school and the community.

It is toward this end that the original recommendations were made, and it is to find out how these recommendations are being carried out that this survey is promulgated.

The results of the survey show that most of the schools do not have any clear-cut objectives for a school health program. Most of the objectives are very general and are not based upon modern educational philosophy and psychology. Too few of them are based upon the importance of objectives, of attitudes, habits, and practices. All too many stress factual information as their primary objectives in a school health program.

*Presented to Governing Council, A.S.H.A., November, 1946.

Out of the 50 schools responding, all of them claimed that they had objectives, but very few actually mentioned what these objectives are based on. Only two schools brought out that they were based on needs and interests of the child. We must know the needs and the interests of the child in order to make our objectives worth while and helpful, and the child also must have a part in making up these objectives.

The survey showed that all but three of the schools had some health instruction; of these, 34 schools had the health instruction as a special course. Twenty-four had it integrated with other courses. Twenty-two of the schools had their health instruction at the secondary level; 24 had it at the elementary level; and 11 schools had it at both levels. Most of the schools had about 40-50 minute class periods, and the number of times per week varied from one to five times; the great majority were twice a week. Most of the classes were co-educational, only a few had separation of the classes.

Twenty-six of the schools use the unit method; 36 of the schools use the textbook method; eight of the schools use other methods.

The integration of community resource and health instruction was actually carried out by all but two of the schools, and most of these schools both contacted community agencies and were contacted also by these agencies. The types of agencies contacted were both voluntary and official health agencies.

Only 14 of the schools and three of the city school systems had school health councils or committees. Only 11 of the schools said that there was a community health council in their community.

Eighteen of the schools had screening tests as one of their health services; 18 of them had psychological examination; 28 had medical consultations; 37 schools kept cumulative health records; 22 schools had audiometer testing; 27 of the schools had tuberculosis surveys; eight of the schools had blood testing surveys. Many of these services were carried out in cooperation with community health services.

In-service health education opportunities for the faculty were offered in 21 separate schools and in five city school systems in the country. Most schools claim that they make some sort of evaluation. However, only one or two seem to indicate any effective form of appraisal. This is truly a much-needed procedure.

The city school systems which responded were those of Chicago; Denver; Darien, Connecticut; Bristol, Connecticut; Goldsboro, North Carolina. The other schools were individual schools

from the following states: Illinois, New York, Colorado, Oregon, Georgia, and Massachusetts.

Inasmuch as the chairman of this committee is best familiar with the Chicago and Cook County public schools, a more detailed analysis will therefore be made of the integration between the community health education and school health education of this area. First, we will take Chicago; the Chicago public schools have at their head a director of physical education and health education, under which there are supervisors of physical education and health education in both the elementary and secondary schools. The health instruction is offered as a special course in the upper elementary and in all four years of the high school. It is integrated with other courses in the primary and intermediate grades. The integration of community resources and health instruction is carried out with about twenty community agencies through the department of physical and health education. To assist in the program the Council of Social Agencies had its health education committee prepare a handbook, *Health Education Handbook for Chicago and Cook County*. This handbook was especially prepared to assist all the health instructors in the schools, so that they would be informed of the health education materials and services available to them from the various community official and voluntary health agencies. This handbook is to be used not only by the city schools, but also by the county schools, school nurses, PTA groups, and libraries.

At present I would say that there is an excellent degree of integration between community health and school health education going on in both the City of Chicago and in the Cook County schools. Health education workshops have been carried out in various schools in cooperation with the various health agencies. Health education institutes and exhibits are being carried out on a cooperative basis of school, official health agencies, and voluntary health agencies. It is hoped that through these health education institutes and through the democratic approach to health education, we will be able continuously to improve the school health program in Chicago and Cook County. As this program of complete cooperation and coordination between the various agencies and the schools is relatively new, we are not yet prepared to make any statistical evaluation. From the interest shown by both community and school, by both parents and children, in tackling health problems, we feel that some advance has been made in an integrated health education program in this area.

From the many comments that have come from the various

schools answering the inquiry forms, certain recommendations and corrections to the original form procedures were made.

For the first procedure it was suggested that we should also include not only the development of health attitudes, but also the growth of knowledge and understanding. It was also felt that not only these factors, but in addition our objectives, should concern themselves with health procedures, and that these objectives should be based upon the child's needs and interests as well as experiences outside of the school. Some mention ought also be made to consult specialists in school and in school health education in building up these objectives.

In addition to the excellent material of the second procedure, suggested revision was that the program of health teaching should be supplemented and enhanced by utilizing problem-solving situations, and also the problems discovered by the child should be carried forth at the time of the discovery and not months or years later.

In the fourth recommendation, mention was made that there should be close coordination of efforts between the school system and the health department. Many of the voluntary agencies wondered why they were left out and not included in this recommendation.

Though the study made was a very crude sampling and cannot possibly be considered as statistically significant, nevertheless it does show that some communities are doing an excellent job of integration of community and school health education, and some are doing very little. On the whole, however, most parts of the country which were surveyed are carrying forth some sort of integration.

The chairman of this committee wishes to thank all the members of the committee, and also the members of the Governing Council, who were so very generous with their time and efforts in assisting with this survey. A word of appreciation also to Dr. William Lauritson of the University of Chicago, who assisted in preparing the survey forms, and a voice of appreciation to the following assistants: Lawrence Sharpe, National Tuberculosis Association trainee, and to Miss Estelle Wagner, who helped in the typing of the material.

Submitted by
FLORENCE BENELL, *Chairman*

TREATMENT OF PEDICULUS CAPITIS IN SCHOOL CHILDREN WITH DDT POWDER*

ALBERT D. KAISER, M.D., F.A.P.H.A.
Health Officer, Rochester, N. Y.

Pediculus Capitis is a common complaint among school children. It is not only an annoying condition to those infected and a menace to children whose home conditions are good, but it is responsible for many days of absenteeism from school. In the Rochester schools during the 1944 and 1945 session it was the second greatest cause of absenteeism.

The louse deposits its eggs firmly fastened to the hair. The incubation period of the egg is seven to 10 days. Then follow three larval molts before maturity, with no pupal stage. The complete developmental cycle is 16 days, and the average life of a louse is one month. The larvæ must have food frequently to survive. They live chiefly on human blood. If well fed, the louse can live for 10 days without food while separated from its host.

The head louse is the bane of the school nurse. It is spread by direct contact from child to child or from an adult to a child. The head louse is eliminated easily. The usual methods employed are successful in killing the head louse if thoroughly applied, but frequently the treatment is not completed and recurrences are common. Children have been excluded from school until the pediculi have been removed and until no nits or eggs are detected in the hair. In many instances the children were readmitted to the school apparently free from pediculi, but in a few weeks the same condition of infestation was evident. This was usually due to reinfection from a home contact or from the hatching of undetected eggs.

To simplify the treatment and control the source of contact, a preparation of DDT powder (10 parts DDT and 90 parts inert powdered talc) was utilized. Head inspections were made by the school nurse on all children in a grade and the infected child was treated by the school nurse. Utilizing a small atomizer, the DDT powder was sprayed on the child's hair, a paper towel being placed over the eyes to prevent any irritation. A towel or kerchief was placed over the scalp to prevent the loss of the powder and to hold the lice that came to the surface and the child was sent home with instructions to keep the head covered until bedtime. In the morning the hair was combed with a fine comb to remove the dead lice and as many eggs as possible.

The child is permitted to return to school the next day follow-

*Reprinted from the *American Journal of Public Health*, October, 1946, page 1133.

ing an inspection by the nurse. Even if the nits are not all combed out, the child remains in school and receives daily inspections until the seventh day, when another application of DDT powder is made, following a shampoo given the previous evening. At the end of the second week another inspection follows. If any nits are detected, a third application of DDT powder is made. Frequently this third application is unnecessary.

In the meantime the nurse has visited the home to inspect all other members of the family. If any member, child or adult, is found to harbor pediculi the same treatment is advocated for the individual not attending school. The nurse will give one demonstration treatment in the home with instructions how to proceed for follow-up care. In no case does the nurse apply DDT powder without the written consent of the parent.

The results have been most satisfactory. In all cases treated, the live pediculi have been promptly killed, usually within two hours. The removal of the nits has been thorough in many instances but incomplete in others. Thus far the treated cases have shown no recurrences within four weeks, which would seem to indicate that the repeated treatments have been effective in either destroying the eggs or in retarding their developmental cycle.

Subsequently a few children have been reinfected but in all such instances they experienced a fresh exposure usually from an untreated case in the home. A marked diminution in the number of children with live pediculi has been noted in the schools where this method has been employed. The number of days of absenteeism has been reduced to an average of one day per child.

There have been no ill effects of any kind thus far and the treatment has evoked no resistance on the part of the children or adults so treated. In some instances parents have refused the treatment with the fear that DDT is dangerous. Ultimately this fear may be overcome, but at present no pressure is used to force this method of treatment on any individual.

Thus far 350 children have been treated. None of the children developed recurrences of live pediculi within a four weeks period. Twelve children were later found to have live pediculi but their infection was from an untreated source in the home.

The experiences of the nurses are uniformly the same. They all testify that the method is easy and requires less effort than the use of larkspur or kerosene. The cooperation of the children and most of the parents has been readily obtained for the results are quick and certain. A routine procedure has now been established in all of the Rochester schools. It is felt that the incidence of *pediculus capitis* will be materially lessened if constant inspection and treatment are employed.

EDITORIAL STAFF

CHARLES H. KEENE, M.D., *Editor*
University of Buffalo, Buffalo, N. Y.

GERTRUDE E. CROMWELL, R.N., *Assistant Editor*

EDITORIAL BOARD

WILLIAM E. AYLING, M.D.
Director of School Health
Service, Syracuse, N. Y.

S. B. MCPHEETERS, M.D.
Director, Public Health
Wayne County Health Dept.
Goldsboro, N. C.

J. A. MYERS, M.D.
University of Minnesota
Minneapolis, Minn.

FREDERICK L. PATRY, M.D.
Psychiatrist
Formerly State Dept. of Education
Albany, N. Y.

C. MORLEY SELLERY, M.D.
Director, Health Service Section,
Public Schools, Los Angeles, Calif.

CLAIR E. TURNER, DR. P.H.
Visiting Professor of
Health Education
School of Public Health
University of California
Berkeley, Calif.

EDITORIAL

On Page 19, of this Journal begins the report of the American School Health Association Committee on "Integration of Community Health Education and School Health Education."

Even though the report is a "report of progress" rather than one of finality, certain things are prominent for comment.

Lack of objectives: That clear cut objectives seem largely lacking in the health education efforts should astonish no one who is familiar with much of the present day education in any field. Fogginess is more or less characteristic of our educational procedure. Much teaching is foggy because the ideas of the teacher are foggy, or the teacher is striving to be "progressive" or to have "integration." The results of this ignorance and of these procedures do not lead to definite precise information, nor to clean cut health actions. Outside the sciences, specific information is little emphasized.

The report suggests that the time to emphasize a fact or an attitude is when or immediately after these come to attention, not weeks or months later. A poorly constructed course of study or one based on faulty concepts or objectives leads to the frequent postponement. Hide-bound adherence to a time schedule—i.e., this fact must be taught in a certain week—while less frequent than formerly, still is a handicap to effective teaching in a field like health. When a health accomplishment or a health catastrophe is prominent in the daily or weekly news is the time to stress teaching on that point. The interest is already there.

Some of these schools think they are aiming their teaching at the needs and interests of the pupils. How do they know this? What correlation is there between physical deficiences commonly found by physical health examinations and the subject matter taught or the pupil reactions striven for? What studies have been made to find the interests in various communities at the various age-grade levels? Very few city school systems have made such research.

Only eleven of some 50 communities report having a Community Health Council. Is the lack of a Health Council due to lack of interest, to ignorance that such a Council is an important adjunct to the health of the community, or to downright inefficiency on the part of those who should organize one.

May we ask, too, what steps these schools and communities are taking to measure the effectiveness of their health education efforts? Outside the definite field of tests and measurements, there are various ways of measuring health education results: e.g., the percentage of inoculations against communicable disease; the morbidity and mortality rates over a period of years in those diseases against which definite campaigns may be launched.—*C. H. K.*

* * * * *

ABSTRACTS AND NOTES

Health and Physical Fitness,—With the establishment of the Health and Physical Fitness Project in its Bureau of Health Education of the American Medical Association, the Association takes another step forward in its effort to contribute to the promotion of health. Health and physical fitness are important even though the popular interest in them has considerably diminished with the end of the war. The Board of Trustees early in 1946 authorized the establishment of a health and physical fitness project in the Bureau of Health Education to work under the supervision of the American Medical Association Committee on Health and Physical Fitness.

The project will include the health and fitness problems of the preschool child, the school child, the college students, the adult, both rural and urban, and the industrial worker. Though the committee contemplates cooperation with all other health agencies working toward health improvement in home, school, industry and community, it has expressed the belief that it is first in the schools and second in industry that the most immediate and most practical approach to the problem lies. The efforts of the consultants in the project will therefore be directed primarily to these fields.

The committee will not attempt to set up any master plans or

"ideal" health programs and then attempt to procure their widespread adoption in the schools and industries of all types and sizes. Rather it is the plan to accumulate source files on the varied health programs now in use with the purpose of making both reports on these programs and the advice and counsel of the two consultants available on invitation to boards of health, boards of education, employers, employee groups, medical societies and women's organizations.

This project is in a sense a continuation of the work carried on by the Association in conjunction with government agencies and other interested groups during the late war. Including the project in the total health education program of the Association and staffing it with a physician who has had wide experience in health education and an educator experienced in the health and physical education fields will give it a permanence and a practicability lacking in the previous organization. From Editorial in *Journal American Medical Association*, November 2, 1946.

* * * * *

The Special Education of Defective Children,—The Ministry of Education has issued to local education authorities directions on the provision of suitable education for children suffering from disability of mind or body. At any time after the age of 2 years a parent may ask to have a child examined to see if he requires special education and, if so, the authority must provide it if desired. Children at school suspected of a disability will be medically examined, by specialists if necessary. In the light of the report, the authority will consider what kind of special education should be given. In serious cases this will be provided in a special day or boarding school, and in other cases arrangements will be made in the ordinary school. For example, partially deaf children should have courses of lip reading at school when recommended by the school medical officer. These children should be carefully watched and if they fail to progress should be sent to special schools. For delicate children there is need of more boarding schools, but some provision can be made for them in the newer hygienic primary and secondary schools, where meals and milk are available. When rest after dinner is recommended, stretcher beds and blankets should be provided.

The educationally subnormal children, including those formerly known as "educable mental defectives," and dull or backward children form the largest category requiring special education. The number may be as high as 10 per cent. In the larger urban areas

day and boarding schools will be required, and arrangements will also be necessary in the ordinary schools. In almost all schools of moderate size facilities will be required for at least a small group of children. These should not be segregated from the other children or from the corporate life of the school. But they will need special help in certain parts of their work. The staff should experiment with enterprising methods and organization for dealing with the problem.

In all types of area there will be a small number of educationally subnormal children who require to be taken away from their homes and educated in a boarding or special school. These include unstable children, children from unsuitable homes, those who are truants or unmanageable in a day special school and those committed to the care of the authority by the courts. In no case should a child recognized as ineducable be allowed to attend school. In the past this has been allowed on sentimental grounds. But one detrimental low grade child can create havoc in a class, distract the other children and occupy the full attention of the teacher. For maladjusted children child guidance clinics should be established and more education psychologists should be appointed. For certain children boarding out arrangements should be made with carefully chosen foster parents. The ministry has also made suggestions for the education of physically handicapped children, blind and partially sighted children and children with speech defects. London letter, *Journal of the American Medical Association*, October 26, 1946, p. 469.

* * * * *

REVIEWS

Twentieth Century Education. *P. F. Valentine, Editor*: Philosophical Library, Inc., New York, 1946; pp. 655, price $7.50.

This text discusses "recent developments in education." It is divided into five parts: Theory and Philosophy, Psychology in Education, Science and Education, Education and Society, the School and Its Problems.

This is an interesting discussion of various phases of the listed parts, and is a valuable summarization of many basic factors concerned in Education.

There is a blurred quality to the type, possibly due to a poor quality of paper, that at times is a considerable eye strain. Chas. H. Keene, M.D.

The Modern Attack on Tuberculosis. *Henry Chadwick, M.D.*, and *Alton S. Pope, M.D.*, The Commonwealth Fund, New York, 1946, pp. 134. Price $1.00.

This revised edition of a handbook first published in 1942

brings up-to-date information on the history, diagnosis, case finding, and the sanitarium. Emphasis is put on the fact that even yet, in spite of a half century of hammering on the need of early diagnosis, and treatment, about 25 per cent of the cases admitted to those sanitarias which will accept advanced cases are beyond help, and die under treatment, and that of the total cases admitted to sanitaria only 10 per cent to 15 per cent are in the minimum stage.

"Wake Up America!"—An excellent biblography of periodical literature is appended. C. H. Keene, M.D.

* * * * *

The Guidance of Children Through Physical Education. *Dorothy La Salle,* A. S. Barnes & Co., New York, 1946, pp. 292. Price, $2.50.

This text, after discussing the values and objectives of physical education and giving some material on Class Organization and Methods of Evaluation, devotes all of Part II to the curriculum and the materials, contents, skills and techniques of the curriculum for Grades 1—6 inclusive.

Much practical material is present that is usable not only by the special teacher in physical Education but by the grade teacher.

* * * * *

MEETINGS

The American School Health Association with the American Public Health Association at Atlantic City, N. J., September 21-25, 1947.

National Conference (3rd) on Health in Colleges, New York, N. Y., May 7-10, 1947.

The American Association of School Administrators, Atlantic City, N. J., March 1-6, 1947.

Influenza Vaccine,—Students at the University of Illinois, Northwestern University, and the State Normal Schools at Carbondale and DeKalb are being offered vaccination against influenza. This is being done under the supervision of the medical authorities of these schools in cooperation with the Illinois Department of Public Health. The vaccine, which is still relatively costly, has been supplied to the schools by the Department in its efforts to further determine its effectiveness in protecting the people of the State. The record of respiratory illnesses among those students accepting influenza vaccination will be compared with those who do not accept. This information while it may not be conclusive in itself, will certainly add another link in the chain of evidence which has been accumulating.

First available to the Army, influenza vaccine was administered to all military personnel in September, 1945. The following November and December, a sharp outbreak of influenza occurred in the United States. Among the civilian population, the incidence of the disease showed a very marked increase. Fortunately the disease was mild in character with only a few deaths resulting. Among the military population, however, the incidence of respiratory illness showed only the normal, seasonal increase.

Now with the vaccine available for civilian use, much interest has been shown regarding its general use during the coming winter. It appears that influenza vaccination does afford considerable protection, although for a short period, probably several months only. Its distribution is necessarily limited because of relatively high cost. For the present, its use will probably be largely confined to those groups where the risk of influenza is greatest, and where private physicians feel that the added protection is desirable. —*Illinois Health Messenger*, Dec. 15, 1946.